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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Tae-ahn Jahng

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4949

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02/02/2010

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EXAMINER

HOFFMAN, MARY C

ART UNIT

PAPER NUMBER

3733

MAIL DATE

DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/798,014	<b>Applicant(s)</b> JAHNG, TAE-AHN	
	<b>Examiner</b> MARY HOFFMAN	<b>Art Unit</b> 3733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 22 June 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-8,10,15,16,18,22-25,27 and 31-39 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,2,4-8,10,15,16,18,22,23 and 39 is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☒ Claim(s) 24,25,27 and 31-38 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 August 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>06/23/2009, 12/22/2009</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 24, 25, 27 and 31-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schwartz et al. (US Pat. 5,573,520) in view of Schwartz et al. (US Pat. 5,573,520).

Schwartz et al. disclose one embodiment comprising a connection unit for use in bony fixation (Fig. 10) comprising a longitudinal metal rod (Fig. 10)(column 7, lines 56-66) having an outer surface including a first end (Fig. 10), a second end (Fig. 10), and a substantially cylindrical center section (Fig. 10) located between and coupled to the first end and the second end (Fig. 10), the center section including a groove formed in the outer surface of the rod (Fig. 10, ref. 52). The rod is made from a material selected from the group consisting of stainless steel, iron steel, titanium, titanium alloy, and NITINOL (column 7, lines 56-66). The grooves are cut toward a center longitudinal axis of the rod (Fig. 10). The first end, the second end, and the center section are a monolith (Fig. 10).

The embodiment of Fig. 10 does not include tunnels; the adjacent tunnels share a common opening on one side of the outer surface of the rod thus forming a zig-zag

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pattern of tunnels passing transversely through a central longitudinal axis of the rod; the tunnel has a diameter and the grooves have a width, the diameter of the tunnel is at least twice as wide as the width of the grooves; the longitudinal axis of each tunnel being substantially parallel to the longitudinal axis of an adjacent tunnel so that the tunnels are substantially parallel with respect to one another; each tunnel has a longitudinal axis, each tunnel is substantially parallel with respect to one another; and each tunnel is substantially orthogonal to an adjacent tunnel. Each tunnel intersects at least one adjacent tunnel.

Schwartz et al. disclose a second embodiment comprising a plurality of holes through the device (Fig. 9, ref. 52), which form tunnels through the device (by tracing a path from one opening to another opening). Schwartz further discloses that the grooves formed in the surface of the device can be varied in depth, configuration and spacing in order to adjust longitudinal stiffness and strength of the flexible member (column 8, lines 5-9)(column 9, lines 36-43).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have combined the holes of the embodiment of Fig. 9 of Schwartz with the grooves of the embodiment of Fig. 10 of Schwartz since Schwartz teaches that the grooves can be modified in order to adjust longitudinal stiffness and strength of the flexible member (column 8, lines 5-9)(column 9, lines 36-43). Modifying the reference in this way would produce holes in outer surface of the device 9)(embodiment of Fig. 9) which would form tunnels through the device (by tracing a path from one opening to another opening) and would form holes intersecting a groove (from

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the hole of embodiment 9 intersecting the groove of embodiment of Fig. 10). The tunnels would form multiple axes, depending which tunnels are traced between which openings (Fig. 9).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have constructed each of the plurality of transverse tunnels having an internal diameter between 0.2 and 3 millimeters., since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

#### ***Allowable Subject Matter***

Claims 1,2, 4-8, 10, 15-16, 18, 22-23 and 39 are allowed.

#### ***Response to Arguments***

Applicant's arguments filed 06/22/2009 have been fully considered but they are not persuasive.

Applicant argues that Schwartz in view of itself does not disclose the claimed subject matter of claims 24, 25, 27 and 31-38. The examiner respectfully disagrees. FIGS. 9 and 10 of Schwartz disclose tunnels and grooves, respectively. Both tunnels and grooves are disclosed as being provided to affect the flexibility of the rod. The examiner asserts that it would have been obvious to combine the two features, tunnels and grooves, to achieve the desired flexibility of the rod. In response to applicant's

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argument that the tunnels would not diametrically opposed tunnel openings would not intersect the grooves, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). Whether or not the tunnel openings would intersect the grooves depends on the placement of the tunnels and grooves in the combination.

The rejections are deemed proper.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARY HOFFMAN whose telephone number is (571)272-5566. The examiner can normally be reached on Monday-Thursday 10:00-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eduardo C. Robert can be reached on 571-272-4719. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mary C. Hoffman/  
Examiner, Art Unit 3733  
/Eduardo C. Robert/  
Supervisory Patent Examiner, Art Unit 3733